

IN THE CLAIMS:

1. – 4. (Canceled)

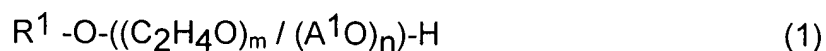
5. (Previously Presented) An assistant for digesting a lignocellulose material, which comprises:

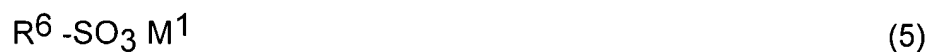
(a) at least one nonionic surfactant selected from the group consisting of a nonionic surfactant (A) and a nonionic surfactant (B); together with

(b) at least one anionic surfactant selected from the group consisting of an anionic surfactant (C), an anionic surfactant (D) and anionic surfactant (E);

in a weight ratio of 100/0.1 - 100/30;

said nonionic surfactant (A) comprising one or more compounds represented by the general formula (1); said nonionic surfactant (B) being obtained by addition of an alkylene oxide to an aliphatic alcohol and comprising one or more compounds represented by the general formula (3) and having a weight-average molecular weight (Mw) and a number-average molecular weight (Mn) providing a ratio of Mw/Mn satisfying the relationship (4); said anionic surfactant (C) comprising one or more compounds represented by the general formula (5); said anionic surfactant (D) comprising one or more compounds represented by the general formula (6); and said anionic surfactant (E) comprising one or more compounds represented by the general formula (7):





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wherein R¹ is a branched alkyl group containing 4-24 carbon atoms represented by the general formula (2):



wherein R² and R³ are independently selected from the group consisting of straight-chain or branched alkyl groups containing 1-21 carbon atoms, and R⁴ is an alkylene group containing 1-21 carbon atoms, R⁵ and R⁶ are straight-chain, branched or cyclic aliphatic hydrocarbyl groups containing 4-24 carbon atoms; R⁷ is a straight-chain or branched alkyl group, alkenyl group, or mono- or di-hydroxyalkyl group, containing 4-24 carbon atoms; R⁸ is an alkylene group containing 1-6 carbon atoms; m is an integer of at least 1, having an average of 4-20; p is a number of 4-20; A¹, A², A³ and A⁴ are alkylene groups containing 3 or 4 carbon atoms; n, r and s are 0 or an integer, of at least 1, having an average of 0-15; q is an addition molar number of 0 or 1-15; k is an integer of 1 or 2; M¹, M² and M³ are monovalent cations; wherein (C₂H₄O) and (A¹O) ,

or (C₂H₄O) and (A²O), in case of the average of n or q being 1-15, are linked random-wise and/or block-wise;

$$Mw/Mn \leq -0.183xK^{-0.930} \times \ln X + 1.327xK^{-0.065} \quad (4)$$

wherein LnX is a natural logarithm of X; X is an average addition molar number of the alkylene oxide per 1 mole of the aliphatic alcohol; and K is the number of carbon atoms in R⁵ of the general formula (3).

6. (Previously Presented) The assistant of Claim 5, which is used in combination with at least one selected from the group consisting of a quinone type digestion assistant and a polysulfide.

7. - 14. (Canceled)

15. (Previously Presented) The assistant of Claim 5, which comprises said nonionic surfactant (B), or a combination thereof with said anionic surfactant (C) or (E).

16. (Previously Presented) The assistant of Claim 5, which comprises said nonionic surfactant (A), or a combination thereof with said anionic surfactant (C) or (E).

17. – 20. (Canceled)